



SAN FRANCISCO OFFICE

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To: Valerie Knepper, MTC

From: Bill Hurrell/Terri O'Connor

Subject: Summary of Findings, MTC Case Study: SFCTA Mission Bay, Draft 3.1

This memorandum presents a summary of findings regarding the San Francisco County Transportation Authority's (SFCTA) case study for Metropolitan Transportation Commission's (MTC) *Reforming Parking Policies to Support Smart Growth Study*. This memorandum includes a review of existing and project conditions, a review of the initial implications, and makes preliminary recommendations based on the analysis of existing conditions and established policy framework. The existing and projected conditions and policy framework were compiled from the following sources:

- 2004 Mission Bay Life Sciences/Biotechnology parking study, local policies, requirements and parking plans located within the Mission Bay Plan, UCSF Master Plan and 16th Street SAR;
- SFCTA model 2025 mode split projections; and
- Zero auto ownership data from the MTC Bay Area Transportation Survey (BATS 2005);

This information includes a review of Mission Bay's Parking Plans and provides a basis for additional SMART Growth parking policy recommendations. The Mission Bay Study Area is indicated in Figure 1.

EXISTING CONDITIONS

Throughout the planning and development of the Mission Bay Project area, there has been collaboration among agencies, developers and tenants with respect to setting marking maximums and design guidelines. The San Francisco Redevelopment Agency (SFRA) set the parking standards in agreement with the San Francisco Planning department in order to support 3rd Street light rail transit corridor. While UCSF was not bound by these requirements as a state agency, they agreed to a lower parking ratio than their original plan and moved three of five planned parking garages from the 3rd Street transit corridor to one more accessible to the freeway on Owens Street. This helped preserve the planned pedestrian and transit character of 3rd Street. Additionally, when Catellus argued that the 1.0 space per 1000 square feet of lab/research office space was not sufficient to support the Life Sciences Biotechnology land use thus reducing

demand for development, a 2003 parking study for the area was able to provide justification for an increase in the requirements.

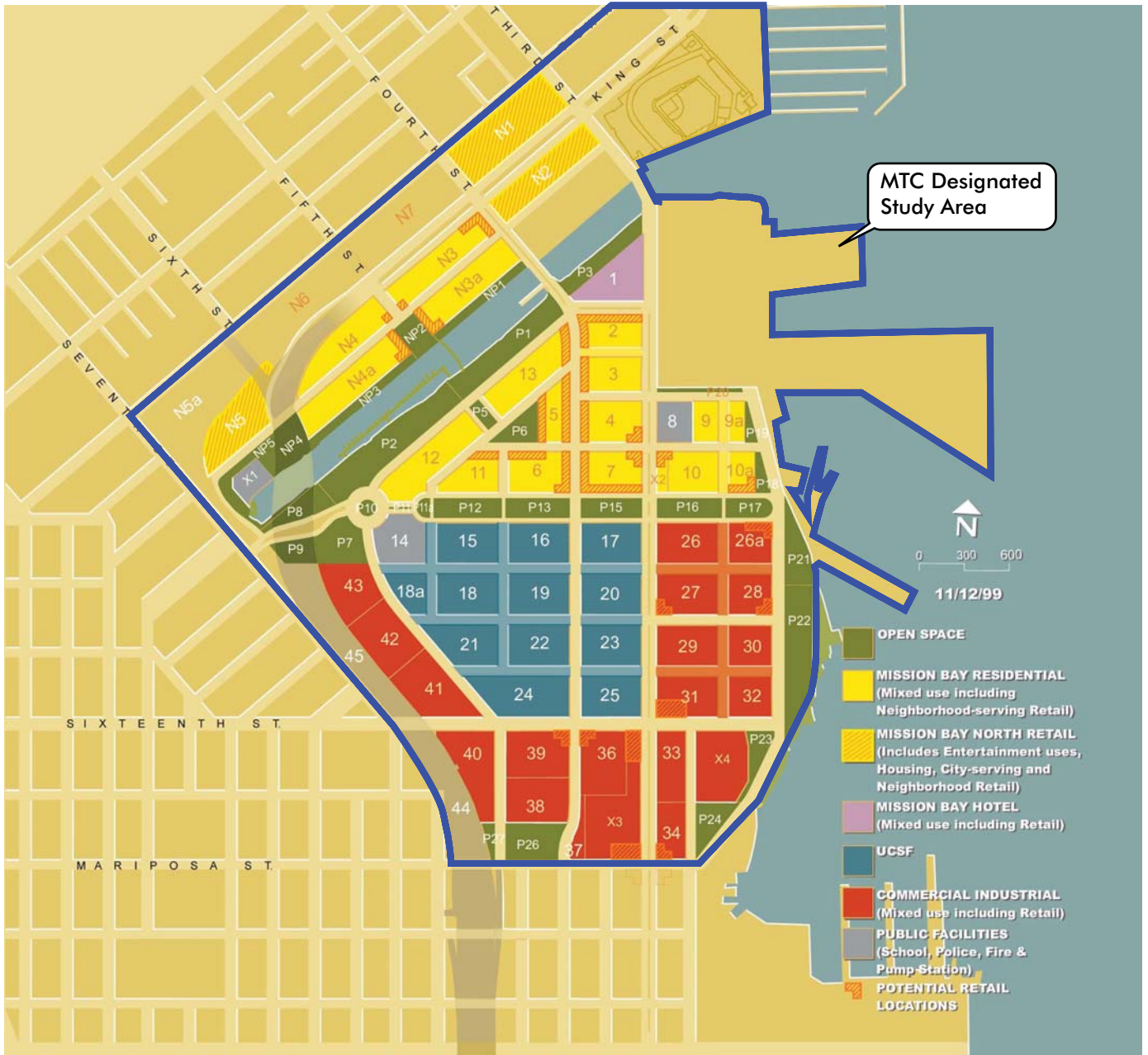
Land Use

The Mission Bay Project Area (Study Area) is entirely within the area covered by the Central Waterfront Plan established in 1980. The Mission Bay Plan was adopted in 1990 as Part II of the Central Waterfront Plan. Along with the adoption of the Mission Bay Plan, the City Adopted Article 9, Mission Bay Districts to provide a comprehensive and flexible zoning system for Mission Bay Use districts consistent with the policies and objectives in the Mission Bay Plan which include:

- Create a variety of uses with housing as a priority
- Emphasize characteristic San Francisco development patterns, for identity and orientation
- Preserve Mission Bay character and history
- Relate scale of development to waterfront
- Develop pattern of neighborhood scaled open space
- Encourage community participation process in development
- Encourage development with respect to natural factors (wind, solar)

The land use elements in these plans were updated to their current status by the 1998 Mission Bay Plan, cosponsored by the San Francisco Redevelopment Agency (SFRA) and Catellus and submitted for public review in April 1998. The Final Subsequent Environmental Impact Report (SEIR) was certified in September 1998. The proposed plan called for about 6,000 housing units; approximately 750,000 square feet (sq. ft.) of retail and entertainment space; a 43-acre site for a new UCSF campus containing about 2.6 million sq. ft. of medical instructional, research, administrative, and support space and a public school site; approximately 6.6 million sq. ft. of mixed research and development, and office space surrounding the UCSF site; a 500-room hotel; and about 47 acres of open space. The Land Use Designations included:

- Open Space
- Mission Bay Residential
 - Mixed Use
 - Neighborhood-serving Retail
- Mission Bay North Retail
 - Entertainment uses
 - City-serving & Neighborhood Retail
 - Residential
- Mission Bay Hotel
 - Mixed Use w/retail
- UCSF Campus
 - Including ground floor retail along South, 3rd and 4th Streets
- Commercial Industrial
 - Mixed Used w/Retail
- Public Facilities



Source: Catellus Development Corporation

Parking Supply and Utilization

In 2004, WSA evaluated the potential changes to the parking requirements for the Life Sciences/Biotechnology uses outlined the Mission Bay Plan.¹ The evaluation was conducted because the original recommended parking allowance as defined in the Mission Bay Plan of 1.0 space per 1,000 square feet of floor area was determined to be low as compared to typical parking utilization rates reported by other for life science/biotechnology uses in the Bay Area.

WSA's research of the traffic and parking characteristics of life science/biotechnology uses indicates that these uses:

- 1) Have a higher demand for parking than Research & Development (R&D) uses because their employees travel to and from work outside the peak commute times and they don't find the use of public transit or carpools as necessary or convenient.
- 2) Have a lower percentage of employees driving in the critical peak commute periods than R&D uses.

While the life science/biotechnology uses generate more parking demand and as a result more daily vehicle trips than R&D uses, they generate less traffic in the peak commute hours than R&D uses. As such, the rate used was estimated by WSA as 2.0 spaces per 1,000 sq. ft. based on the comparison of parking demand for similar uses in the Bay Area and adjusted for the urban character of Mission Bay.

Parking Demand Methodology

WSA's comparative analysis of Life Sciences/Biotechnology firms in the Bay Area to the Mission Bay Plan showed similar squared footages per employee but marked differences for parking spaces per sq. ft. The original parking analysis for the Mission Bay plan assumed an average density of 290 sq. ft per employee for life science/biotechnology uses, which is consistent with the average employee densities of 275 and 350 sq. ft. per employee reported by major Bay Area biotechnology corporations.²

These corporations also reported that their parking needs are in the range of 3.0 to 3.3 spaces per 1,000 sq. ft.³ The actual experience of the biotechnology corporations suggests that the parking demand for this type of use is not much lower than conventional office space, which typically requires 3.0 - 3.5 spaces per 1,000 sq. ft in a suburban environment. Based on the more recent experience of the biotechnology corporations, and adjusting for the more urban character of Mission Bay, WSA estimated the actual parking demand of the life science/biotechnology uses to be 2.0 spaces for 1,000 sq. ft.

Parking Supply and Demand

Based on WSA's parking demand methodology, the original Mission Bay Plan would generate a total peak parking demand of 25,242 spaces. The plan called for a supply of 20,426 spaces,

¹ The Mission Bay Plan was approved of as part of the Mission Bay Subsequent Environmental Impact Report (SEIR) (1998)

² Chiron located in Emeryville, CA and Genentech located in South San Francisco, CA.

³ While these parking ratios are for a more suburban environment than Mission Bay, they are substantially higher than the 1.0 space per 1,000 sq. ft. allowable supply assumed for the Mission Bay office and R&D uses.

resulting in a parking deficiency or shortfall of 4,816 spaces. However, in Mission Bay North there was a substantial reduction in the development program as compared with the original plan⁴ which resulted in a net reduction in planned supply of 1,734 spaces.

Additionally, the developer Catellus proposed to use this reduction in supply in Mission Bay North as a basis for increasing the amount of parking for life science/biotechnology uses in Mission Bay South, without increasing the overall amount of parking in Mission Bay from that envisioned in the SEIR.⁵

In terms of parking demand, the SEIR analysis originally assumed a demand of 1.36 spaces per 1,000 sq. ft. of life science/biotechnology (as represented by a 50/50 percent mix of office and R&D). Increasing this demand factor to 2.0 spaces per 1,000 sq. ft. would result in a net increase in parking demand of 1,111 spaces in Mission Bay South. This would be more than offset by the 1,620 decline in demand projected for Mission Bay North. For the total project the overall 4,816 space deficiency in parking projected for the original plan would be reduced to 4,307 spaces.⁶ This 509 space reduction in demand represents 2.0 percent of the total demand, so the net impact of these changes is relatively small in terms of the overall Mission Bay Plan.

Traffic Impacts

According to the WSA report, the increase in parking demand for life science/biotechnology uses from 1.36 to 2.0 spaces per 1,000 sq.ft. would not result in an increase in the impact of the project on peak hour traffic conditions due to reduction of the typical peak hour factor for life sciences/biotechnology uses from the original SEIR estimate of 12.6% to 9.3 % observed at Chiron, a Bay Area biotechnology firm.

In fact, due to reductions in land use Mission Bay North there was an estimated 2,200 reduction in the PM peak hour person trips in vehicles for that portion of the project area. As a result the overall effect in the changes in parking supply and demand will be a net reduction of the traffic impacts of the Mission Bay project.

Parking Discussion

⁴ The planned amount of commercial retail has declined from 412,000 sq. ft. to 200,000 sq. ft. and the multiplex moving theater project has been deleted. These changes reduce the total estimated demand for parking from 6,172 spaces to 4,551 spaces, a reduction of 1,620 spaces in peak demand. A reduction in parking supply would also occur, as a total of 3,342 spaces are now planned for Mission Bay North as compared to 5,076 spaces in the original plan.

⁵ Catellus proposed to increase the parking supply for 1,734,000 sq. ft. of office and R&D offices from 1.0 space per 1,000 sq. ft. to 2.0 spaces per 1,000 sq. ft. which results in an increase in the overall parking supply of 1,734 spaces. This increase equals the reduction in parking supply that has occurred in Mission Bay North, resulting in no net change in the total parking supply for Mission Bay.

⁶ Demand: $25,242 + 1,111 - 1,620 = 24,733$

Supply: $20,426 - 1,734 + 1,734 = 20,426$

Deficit: $24,733 - 20,426 = 4,307$

This WSA Parking study and estimated parking demand rate is relevant to the SFCTA's goals because it accounts for the special nature of the land uses in Mission Bay and works within the established parking maximum for the district. It evaluates the future parking needs of the Mission Bay redevelopment area, particularly the life science-biotechnology uses in relation to the overall parking demand for the district. It also helps provide a better understanding of how a parking cap and/or parking bank (smart growth parking model) could work within a district, that hasn't fully been developed.

SFCTA Model Forecast

The SFCTA countywide travel demand forecasting model (Model) was used to develop the travel forecasts and projected mode split for current (2005) and future (2025) Cumulative conditions. This approach results in a cumulative impact assessment for future conditions and takes into account anticipated developments in the vicinity of the study area, plus the expected growth in housing and employment for the remainder of San Francisco and the region.

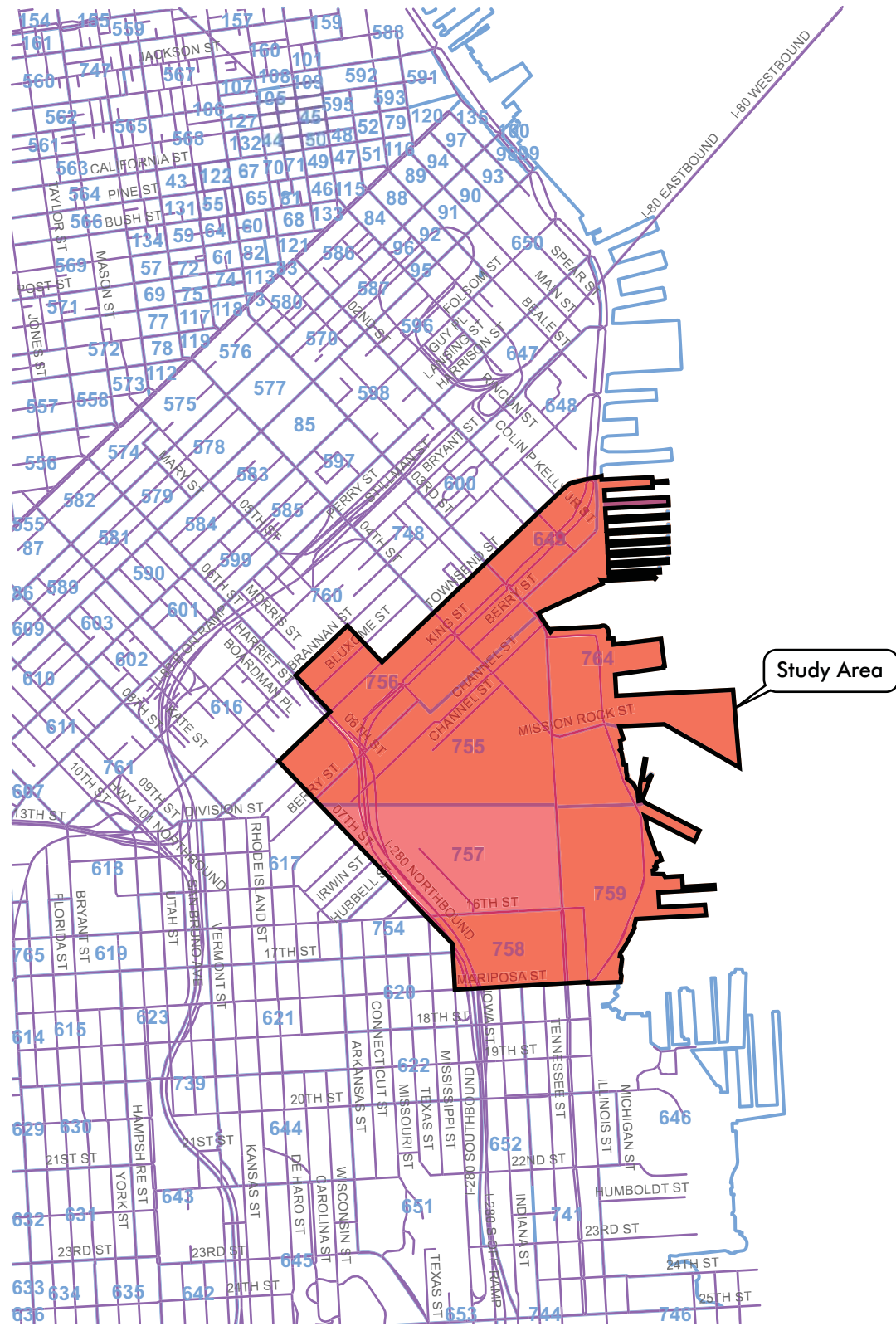
Within San Francisco, the San Francisco Planning Department adjusted the forecasts to account for known and pipeline projects to factor ongoing area-wide planning efforts. Overall, the year 2025 cumulative conditions forecasts used in the analysis exceed the ABAG forecasts for San Francisco.

Within the model, the entire Bay Area region was divided into 1,750 Transportation Analysis Zones (TAZs) about 800 of which are in San Francisco and seven of which are in the Mission Bay Study Area. The Mission Bay TAZs are indicated on Figure 2. The most recent version of the Model estimated future travel demand for the entire nine-county Bay Area, based on land use and employment projections developed and adopted by the Association of Bay Area Governments (ABAG). For each TAZ, the Model estimates the travel demand based on the population and employment assumptions, determines the origin and destination and mode of travel (auto, transit, walk and bicycle) for each trip, and assigns those trips to the transportation system (roadway network and transit lines).

Most of the Mission Bay TAZ's⁷ show a marked increase in transit mode share in 2025 from 2005, due to the increase in transit accessibility planned in the Project Area. TAZ755 which includes a portion of the UCSF campus shows a corresponding increase in walking and biking as well as a significant decrease in automobile share. TAZ759 shows an effective mode switch between automobile and transit, with the growth of the adjacent 3rd Street light rail. TAZ756 and TAZ758 both show an increase in transit share and corresponding decrease in walking share, perhaps due to the close proximity to the 3rd Street light rail and increased MUNI Metro service.

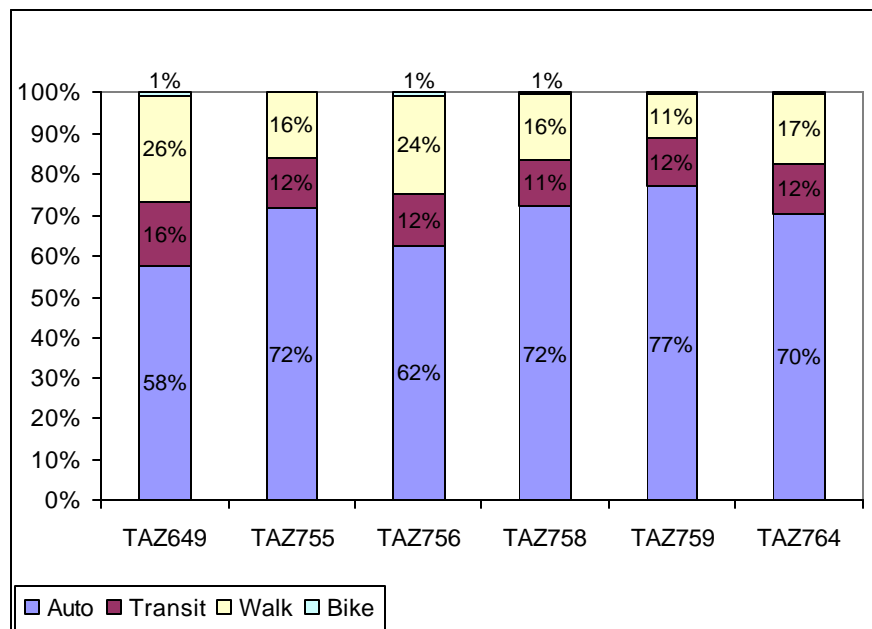
Mode split data from SFCTA's model for the Mission Bay Travel Analysis Zones (TAZ) are shown in Figures 3 and 4.

⁷ TAZ649 is currently highly transit accessible with the Mission Bay light rail line and MUNI Metro bus lines thus future improvements in Mission Bay are not projected to alter the mode split.



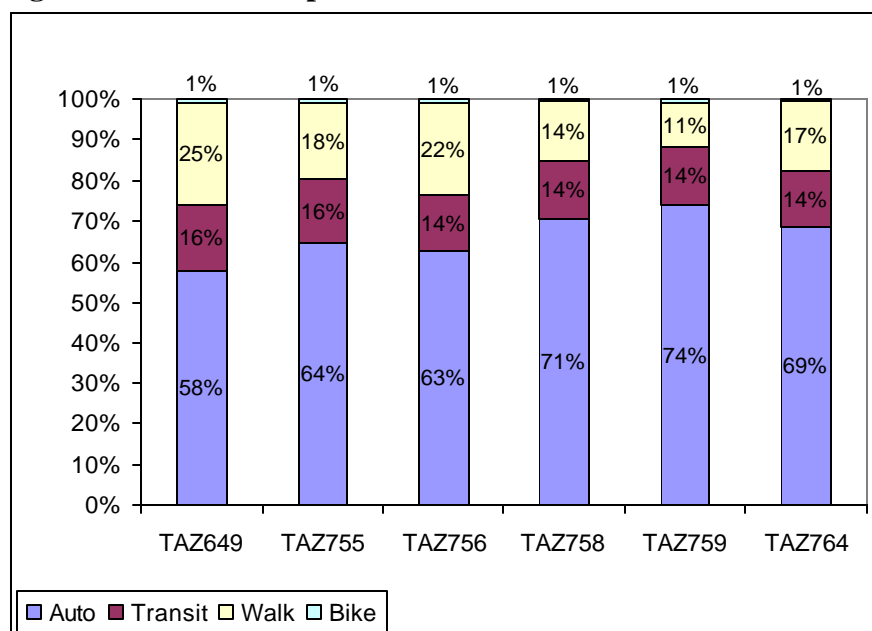
Source: SFCTA

Figure 3. 2005 Mode Split



Source: SFCTA 2005 Model

Figure 4. 2025 Mode Split

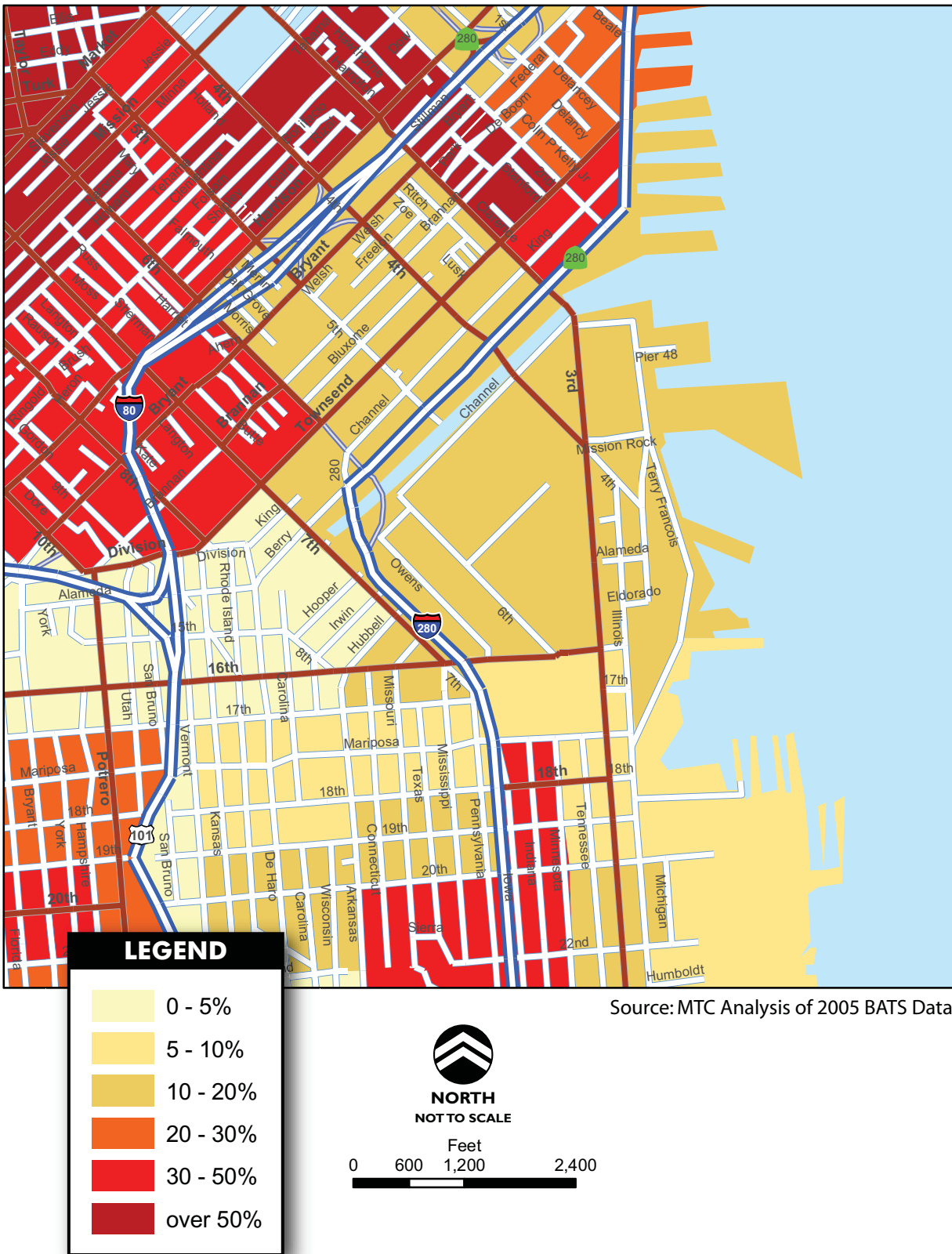


Source: SFCTA 2025 Model

Car Ownership

Zero auto ownership data from the MTC Bay Area Transportation Survey (BATS 2005) indicate a significant population of zero car households for the Mission Bay area. There are a significant

percentage of households (10-20 percent no-car) throughout the majority of the study area and (30-50 percent no-car) concentrated, at northeastern Mission Bay along King Street and Townsend. Furthermore, neighborhoods immediately adjacent to the study area to the northeast (Tenderloin) and northwest (Southbeach) are significant, ranging over 50 percent and 30-50 percent zero auto households respectively. The level of car ownership is a good indicator of the potential for many of the smart growth strategies being considered for the Mission Bay District.



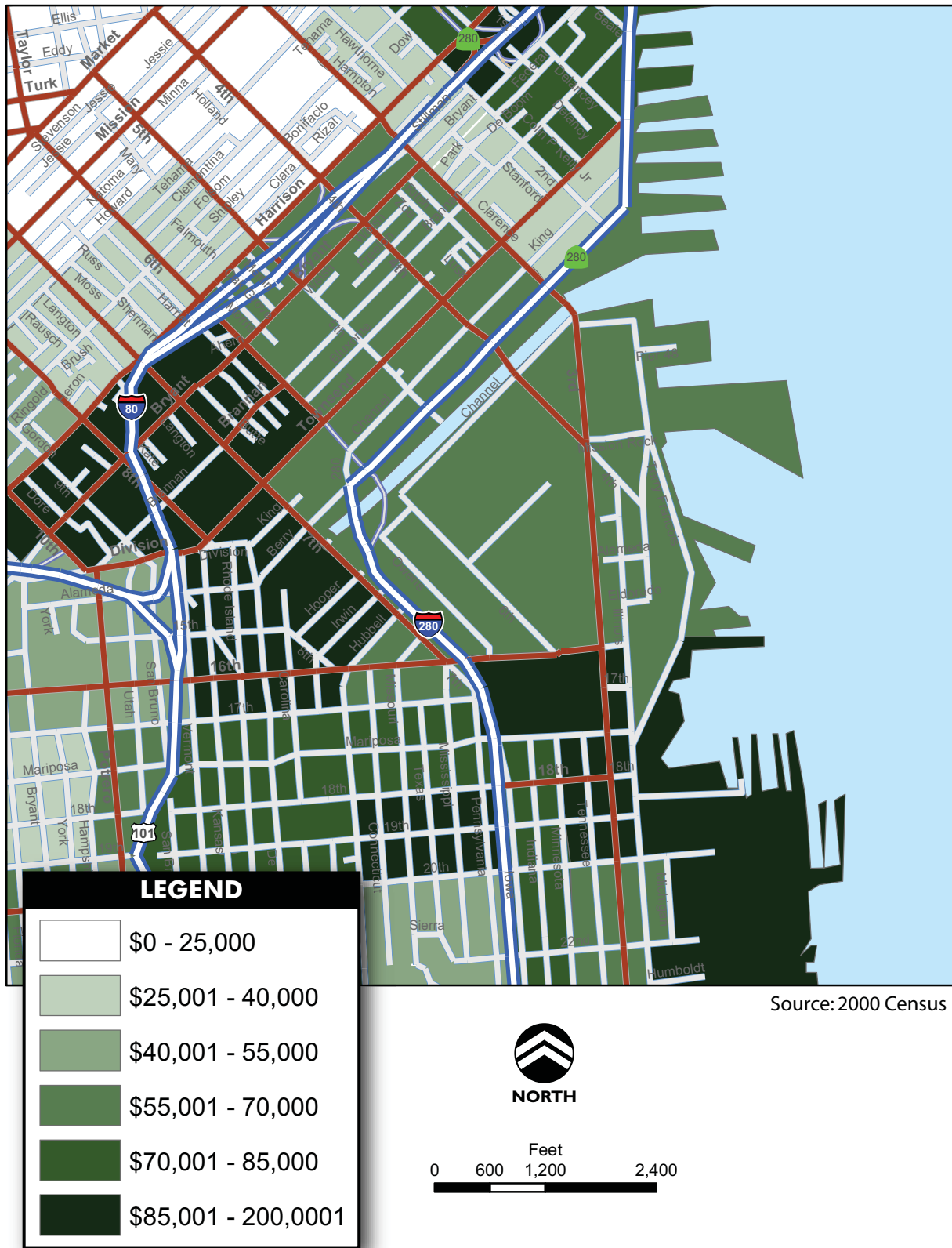
Income Distribution

Median income data for block groups located within the study area from the 2000 Census show that there are a range of different income groups within the site and its immediate vicinity. However, there has been considerable change and development since 2000, including a significant amount of new housing and the opening of the Giants Ball Park. The majority of the site including UCSF, North Mission Bay from 3rd Street to 7th Street, and the eastern waterfront falls within the \$55-75,000 group. A much lower income pocket (\$25-40,000) is located to the northeast between Townsend Street and I-280. In contrast, much higher income (over \$85,000) groups are located directly to the south of Mariposa and west of I-280.

With regard to the high number of households with zero auto ownership in Mission Bay there appears to be some correlation with lower income. The northeastern waterfront and its lower income neighbors to the north (\$0-25,000) have the highest percentage of zero auto households on or near the study area (on-site 30-50 percent, north over 50 percent). However, there are some indications of potential self selection for households with higher median income ranges (\$55-70,000) and zero automobiles (10-20 percent) adjacent to areas with high transit accessibility (TAZ756 – Mission Bay North – Townsend and Third Street). Additionally, when framed by 2005 mode split data, TAZ756 also has one of the lowest auto mode shares and the second highest walking mode share. Both middle income TAZs (755 and 764) adjacent to the Channel and the highest income TAZ758 also have the next highest walking mode shares at 17, 16 and 16 percent respectively.⁸

These findings support the idea that proximity to major transit service will attract households that choose to use transit for various reasons including economics, health or personal choice. Furthermore, transit accessibility can help retain or support those households that reside near public transit due to economic necessity or limited parking supply. Figure 6 shows median income by block group.

⁸ It should be noted however, that the current income data may have changed due to housing development in the area since the original data collected for the 2000 census. More recent demographic data for the area is not available.



URBAN PARKING DESIGN ELEMENTS

There are several documents that provide guidance, policy and procedures for parking design and non-motorized connectivity throughout the Mission Bay Study Area. These include the Mission Bay Scope of Development for North and South Mission Bay, the Mission Bay Major Phase Applications for the North and South Areas (North: N1, N2, N3/N3a, N4/N4a, South: 8-10a, 26, 26a, 27, 28, 41, 42, 43, 45) and the Mission Bay Campus Master Plan and Design Guidelines.

General Parking Design Guidelines

Mission Bay's Scope of Development (SoD) contained general parking guidelines that were directed at ensuring that parking facilities were seamlessly integrated into the scale and character of Mission Bay neighborhoods. The general parking guidelines have the following requirements:

Residential Sidewalk Edge:

Parking for residential uses should be set back from public streets or provide adequate screening measures and buffered at grade by street-oriented uses such as housing units with street access, retail uses, residential entrances and foyers, parking podium access stairs and elevators, common areas, community facilities or landscaping.

- Minimum 50% of parking frontage on a lot should be an active use
- Building base along parking frontage should be compatible with adjacent buildings
- Openings to parking areas should be screened to minimize visual impact
- Residential garage doors should be visually opaque and attractively designed
- Curb cuts should be spaced to maximize on-street parking and minimize sidewalk interruptions

Commercial/Industrial Sidewalk Edge:

Parking for Commercial/Industrial uses should be set back from public streets and/or buffered at grade by street oriented uses such as retail, building entrance lobbies, common areas such as cafeterias, business service uses, or landscaping, with the objective of eliminating blank walls.

- Building base along parking frontage should be compatible with adjacent buildings
- Openings to parking areas should be screened to minimize visual impact
- Curb cuts should be spaced to maximize on-street parking and minimize sidewalk interruptions

Automobile Access to Parking:

Avoid breaking up continuity of retail frontage on streets throughout Mission Bay South. Access to parking for commercial and residential uses is discouraged on Third and Fourth Streets.

Pedestrian Access:

The design of parking structures should promote the use of public sidewalks and mid-block connections for access to dwelling units from parking structures

- Pathways and stairways linking parking structures to buildings should be interesting, well-lit and secure
- Direct access from parking lots to lobby/residences should be avoided

- Landscaping, paving and trellises should be used to enhance the pedestrian environment

Residential Podium roofs:

The roofs of residential parking podiums should be finished in attractive landscaping, walking surfaces or recreational uses where feasible

Lighting:

Lighting should be designed for vehicular and personal safety, minimizing dark areas and those without clear sightlines. Additionally light pollution due to fixtures and vehicle headlights should be avoided and/or minimized.

Entries:

Pedestrian and vehicle entrances to parking garages should receive careful design treatments, in order to visually complement surrounding building design and convey the intensity of use they will receive.

Architectural Design Parking Guidelines

The SoD contains other design guidelines related to parking including: architectural design elements (pertaining to façade differentiation and first floor use requirements) and street design elements (including sidewalk and bike lane features) and loading access requirements all which helped to enhance the pedestrian and bicycle network in the Mission Bay Study Area. The architectural and building design requirements that pertain to parking garages are as follows:

Architectural Details for Shared Parking

Wherever feasible, active uses such as retail should be included on ground floor of satellite parking structures.

Architectural Character:

Parking garages should be compatible in color and materials with adjacent buildings and the development pattern in Mission Bay

- The architecture should distinguish the ground floor from the upper floor facades to form a visual base for the buildings
- Solid wall (non-transparent or non-articulated) surfaces should be avoided at the street level for visual and security reasons

Street Design and Access Guidelines

The SoD contains guidelines for street design elements (including sidewalk and bike lane features), transit connectivity policy and loading access requirements all which helped to enhance the pedestrian and bicycle network in the Mission Bay Study Area. These guidelines are as follows:

Loading Access

Loading facilities (and outdoor refuse storage and dumpsters) should be located away from major pedestrian routes and residential uses (including shared with retail) to avoid potential traffic conflicts and nuisance.

Transit First

Streets and pathways should connect to the City's network of bicycle and pedestrian routes. Development should be concentrated and retail areas located to maximize convenience and connections with public transit (including ferry and bike).

Key Street Design

General Design guidelines were provided for key Mission Bay commercial, transit, residential streets and boulevards, indicating a range of sidewalk widths, pathways and landscaping to enhance the pedestrian and bicycling environment in Mission Bay. A number of the design guidelines indicated plans for bike lanes, bicycle and pedestrian pathways and parks all of which are intended to link to the City and region's pedestrian and bike path system. Mission Bay's key streets are detailed in Table 1 below.

Table 1. Mission Bay Key Street Design Details

Street Name	Class/ Character	Sidewalk	Bike lane	Path/ Park	Bike/Ped Connectivity	Light rail	Parking lane	Setback
4 th Street	Neighborhood commercial	12-16'	4'	N	City to UCSF	Y	8'	0
3 rd Street	Mixed use-transit	12'	N	N		Y	N	0
King Street	Mixed use-transit-arterial	14.6'	N	N		N	10'	0
Owens Street	Boulevard	0-12.5'	N	Y		N	8-11'	0
16 th Street	Arterial	10'	8'	Y	Citywide	N	N	20'
Terry Francois	Boulevard	12.5-15.5'	5'	Y	City/Region	N	8'	0
Mariposa	Arterial	10-20'	N	N	Citywide	N	N	14'
Mission Bay Commons	Boulevard	12'	N	Y	Citywide	N	8'	0
Neighborhood	Minor Street	12'	N	N		N	8'	0'

Sources: Mission Bay Major Phase Applications for North: N1, N2, N3/N3a, N4/N4a, for South: 8-10a, 26, 26a, 27, 28, 41, 42, 43, 45 (1999) and UCSF Mission Bay Campus Master Plan (1999)

Mission Bay Campus Master Plan

The UCSF Mission Bay Campus conforms to the "vara" block grid of the Mission Bay Development (275 feet wide by 412.5 feet long) the historical unit unique to San Francisco. The grid is intended to maintain traffic and transit connections in the City and preserve view corridors to the surrounding area. The Mission Bay Campus Master Plan focuses on a network of interconnected open spaces and passageways which physically link buildings throughout the campus. This pedestrian landscape was designed as an alternative to sidewalk circulation on vehicular streets. As such, the parking garages for the UCSF Mission Bay Campus were placed at the eastern and western edges of the site to minimize the need for vehicular access. The UCSF Mission Bay is not governed by the 1998 Mission Bay Plan.

UCSF Parking Facilities

The Mission Bay Master Plan designates a total of five- seven to eight story above-ground parking garages, three on or adjacent to Owens Street (west side of campus) and two on Third Street (east side of campus):

West side: Garage 18A (6th and 13th Street Access), Garages 18B, 21A (6th Street Access)

East side: Garage 20B (13th Street Access), Garage 23B (15th Street Access)

UCSF Vehicular Streets

A small number of streets on the Mission Bay campus were designed for vehicular access to the designated parking garages. These include 13th Street East, 15th Street East and 6th Street. Thirteenth and Fifteenth Street East are vehicular in design and are used primarily to access and egress the perimeter parking garages. These streets have 14-foot sidewalks and are oriented east-west.

Sixth Street is vehicular in design and is part of the Owens Street gateway.⁹ It forms part of the UCSF shuttle route and is used to access the parking garages and the future San Francisco Unified School District site. A dedicated drop-off for the school will be located on 6th Street rather than 13th Street to avoid potential conflicts with the access/egress from the 18A parking garage. The sidewalks range from 15-20 feet wide.

Overall Building Design Strategy

Mission Bay Building Design Guidelines developed an overall building design strategy so that buildings share a basic organization and articulation. These include:

- Maintenance of continuous façade lines along base and parapets,
- Building facades should acknowledge and reflect neighboring environment
- Buildings should be articulated with openings and windows

As such, the Parking Garage Design Guidelines and Requirements include

- 85' height restriction, corner stair towers may exceed restrictions
- 12.5' ground floor height
- 10.5' subsequent floor height
- Uncovered rooftop parking level
- Articulation: Stair towers integrated to overall mass and surface of building

⁹The Owens Street Gateway is the western entrance to the campus acting as a seam between the campus and the private R&D zone to the west. Campus buildings are set back 20 feet and the area is landscaped with tall spreading trees. Service and loading areas are screened to minimize pedestrian impact. UCSF Master Plan ppC-34.

SMART GROWTH PARKING

Goals

The SFCTA has several goals that they want to achieve as a part of MTC's Smart Growth Parking study:

- Evaluating the future parking needs of the Mission Bay redevelopment area.
- Understanding how a largely vacant and redeveloping area in a densely populated City can benefit from Smart Growth parking policies.
- Developing a parking model that could be applicable for other areas in the City.
- Understanding UCSF and other stakeholders' parking operation within a future transit corridor.
- Assessing parking concerns of existing or new residents in Mission Bay or in areas on the fringe/adjacent to Mission Bay. This includes demand shifts for on-street parking as new residential/mixed use development occurs.

Existing Relevant Policies

San Francisco's existing relevant policies for the Mission Bay Area will be discussed and analyzed as to how they contribute to or hinder the City from furthering those goals. The SFCTA administers and oversees the delivery of Prop K, ½ cent local transportation sales tax program and is the Congestion Management Agency (CMA) for the City of San Francisco.

Policies and programs were evaluated within the following documents:

- Mission Bay Subsequent Environmental Impact Report, 1998.
- Mission Bay North and South Infrastructure Plans, 1998.
- UCSF Mission Bay Campus Master Plan, 1999.
- Sixteenth Street Strategic Analysis Report (SAR), 2005.

As such, the existing and proposed policies impacting the Mission Bay area were evaluated for the provision of the following SMART Growth benefits:

- Density
- Connectivity/Walkability/Livability
- Transit/Mode Choice
- Convenience/Ease of Use
- Progressive Financing/Pricing
- Overall/Overarching Benefits

Mission Bay Infrastructure Plan

The Mission Bay Infrastructure Plan governs construction and development of infrastructure in North and South plan areas consistent with redevelopment requirements. The plan also establishes the design and construction standards, criteria and specifications of the areas including streets, blocks lots and right of way, combined sewer, open space and other infrastructure (i.e. pedestrian bridge, MUNI related) including subdivisions and improvements.

The transportation mitigation measures from the SEIR were rolled into the overall Mission Bay development project and are triggered by the following phasing methodology.

- Adjacency: when a development occurs in a major phase or for a project, adjacent infrastructure necessary for access and utilities will be constructed
- Cumulative Development Requirements: due to effect of cumulative traffic growth some key intersections and street segments may reach congested conditions before development occurs on adjacent parcels, therefore thresholds have been established for each improvement, based on the number of PM peak vehicle trips that would cause one or more of the plan intersections to deteriorate to unacceptable LOS

The project “triggers” are continuously updated as the Mission Bay Project is implemented to ensure that the transportation infrastructure improvements are kept on track with the estimated traffic impact. This included the private off-street parking supply required to support development as it progressed, in accordance with the Mission Bay Parking requirements.

Benefits:

- Alleviates negative affects of development (e.g. congestion) by incorporating area-wide transportation improvements in phase with development. See SEIR Mitigation Measures.
- Spreads out burden/cost of overall infrastructure improvement to all development projects, encouraging more sustainable development

Mission Bay SEIR

The Mission Bay SEIR established a series of measures to mitigate transportation related project impacts, outside of transportation improvements already included in the overall project. The transportation measures that were determined to foster an environment of smart growth planning and transit supportive policy, in which parking is one integral piece, are included in the following discussion of relevant policies. The following mitigation measures addressed traffic, transit, and transportation system management to increase alternative mode shares, resulting in a reduced need for parking an important element in smart growth policy and planning:

Mitigation Measure: Traffic Mitigation/Congestion Management

- Required several project intersection mitigation measures based on PM peak hour traffic thresholds, affects on-street parking.
- Increased Bay Bridge Tolls during commute hours to discourage single occupancy vehicle (SOV) trips.

Benefits: Overall/Overarching

Mitigation Measure: Transit Service Expansion

- Encourage AC transit to expand Transbay service to accommodate cumulative demand, support funding initiatives.
- Extend N-Judah Line from Embarcadero to Mariposa Street.

Benefits: Transit/Mode Choice

Mitigation Measure: Transportation System Management (TSM)

- Form a Transportation Management Association (TMA) to implement a TSM Plan
- Form a Transportation Coordinating Committee (TCC) to address area wide transportation planning issues and coordinate with other uses and neighborhoods
- Prepare TSM Plan which could include the following elements:
 - Shuttle Bus System from Mission Bay to regional transit stops
 - Transit pass sales in neighborhood retail/commercial buildings
 - Employee transit subsidies
 - Pedestrian signals at Owens Street near pedestrian Bridge, Mission Bay South (MBS)
 - Secure Bicycle parking in all area parking garages (1 bike space/20 auto spaces)
 - Appropriate street lighting
 - Transit/pedestrian/bike route information: maps/kiosks
 - Provide parking management guidelines for private parking facility operators
- Constrain Parking supply to within UCSF Site (MBS)
- Expand Regional Ferry Service, study feasibility
- Offer/Encourage flexible work schedules

Benefits: Transit/Mode Choice, Connectivity/Walkability/Livability, Convenience/Ease of Use
Consider:

- Requirements for neighborhood employers or a certain size to participate in TSM
- Stronger incentives for non-motorized transit/commute choices, such as:
 - Employer supported/organized carpools
 - Employer provided showers/lockers for bike commuters
 - Regular lunch-time and peak hour shuttle service to transit
 - Real-time transit info at bus and light rail stops.
 - Car-share pods provided for employee errands

UCSF Mission Bay Campus Master Plan – Transportation Circulation & Parking

The Mission Bay Campus Master Plan set forth a series of goals related to transportation circulation and parking with several associated objectives

GOAL: Access and Circulation – ensure access in and around campus is safe, direct and efficient

- Provide easy access to sites from multiple modes
- Create Internal circulation systems that minimize pedestrian conflicts
- Lessen perimeter congestion
- Provide efficient inter-site transportation

Benefits: Convenience/Ease of Use

GOAL: Alternatives – emphasize alternatives to reduce auto traffic in and around campus sites

- Promote car/vanpooling, ridesharing, public transit, bicycling
- Consolidate sites
- Inter-Campus shuttle service
- Maximize utility of public transit
- Disincentivize SOV travel

Benefits: Transit/Mode Choice, Convenience/Ease of Use, Density

GOAL: Parking – provide adequate parking to serve community (patients, visitors, faculty, staff and students) while prioritizing/promoting alternative transit options

- Satellite parking for commuters
- Provide parking by specified user group, short term visitors, outpatients, emergency vehicles, employees, students
- Prioritize parking by user group
- Open parking to community during off-peak hours for reduced rates

Benefits: Convenience/Ease of Use

GOAL: Neighborhood Impacts – Minimize impacts on local traffic congestion and parking shortages

- Consolidate sites to limit extensive people and materials movement
- Locate facilities to emphasize transportation alternatives
- Explore satellite parking w/ shuttle service
- Develop off-street parking supply to divert parking demand away from neighborhood streets
- Explore funding mechanisms through potential parking fees
- Provide parking for community at off-peak hours for reduced rate (shared parking)

Benefits: Overall/Overarching, Convenience/Ease of use, Progressive funding, Transit/Mode Choice

Sixteenth Street Strategic Area Plan (SAR)

Showplace Square, the Mission and Potrero Hill neighborhoods are expected to gain 4,300 new housing units and 6,150 new commercial jobs by 2025, not including the Mission Bay development. Combined these development pressures will increase the need for 16th Street to serve local neighborhood trips, support longer distance freight, and commuter trips. Currently, 16th Street functions both as a neighborhood, pedestrian-scale street as well as an important city route for auto-through traffic. As this development takes place over the next 20 years, 16th Street's role as a transit and neighborhood serving corridor will need to be greatly enhanced.

As such, the SFCTA recommends that corridor improvements accommodate a greater proportion of newly generated trips by transit, bicycling and walking over auto. The SAR proposes recommendations for near term (within 2 years) and mid term (between 2-7 years) for accommodating greater proportions of growth in transit trips along the 16th Street corridor with

the goal of reduced auto mode share. These strategy recommendations are organized into supply-side and demand-side.

Supply Side Strategies:

- Transit
 - Implementing transit priority measures on 16th Street,
 - Re-examining transit network coverage and service levels to/from adjacent neighborhoods, and
 - Using MUNI's upcoming service planning/network study to identify the most efficient/effective ways to make transit a more attractive mode choice

Benefit: Transit/Mode Choice

- Pedestrian and bicycling infrastructure needed to support local walking/cycling trips.
 - Develop a bicycle facility on 17th Street, with good connections at the eastern end to the 16th Street BART station and beyond to Market Street. (in planning/implementation stages)
 - Address pedestrian infrastructure gaps and safety deficiencies along the corridor from 3rd Street to Market Street.

Benefit: Connectivity/Walkability/Livability,

- Funding:
 - Federal, and state grant opportunities
 - Developer contributions
 - TIDF payments,
 - Tax increment financing proceeds from redevelopment areas, or
 - Self-taxing Business Improvement District (BID).

Benefits: Progressive Financing

Demand Side Strategies (Near Term):

- Market-based parking management, and
- Commute benefit programs such as
 - Department of Environment's Commute Benefits and
 - Emergency Ride Home package aimed at new/large Mission Bay employers
- Managing freight demand activity by
 - Improving signage and
 - Accommodate goods movement amid increasing residential uses.

Benefits: Progressive Financing/Pricing, Transit/Mode Choice, Convenience/Ease of Use

Demand Side Strategy (Mid-Term): ensure that new development adheres to "transit first" principles, especially:

- Market-based approaches to parking management (i.e., unbundling the cost of parking from a residential unit),
- Appropriate pricing of parking, and
- Providing carshare spaces.

Benefits: Progressive Financing/Pricing, Convenience/Ease of Use

Implications for Smart Growth

The City of San Francisco has set forth several smart growth enabling policies and programs in the Mission Bay District that support its Transit First policy, a set of directives that support mobility not only through collective public transit, but by all alternatives to single occupancy vehicles.

Through these policies the City has laid substantial groundwork toward establishing the Mission Bay district as an area of future smart growth. Additionally, having instituted these policies prior to substantial new development, the Mission Bay District is poised to grow in a dense, mixed-use, transit supportive and sustainable manner. As such, there is potential to set new policies to further shape the growth of the district.

The Mission Bay District is unique and has shown the ability of the cities agencies to work together to make a densely populated transit supportive neighborhood with flexibility and long-term planning. However, where there are large redevelopment areas in the future these agencies can look to the Mission Bay Project Plan as an example of how to create a common vision of smart growth. Additionally, the city can look to setting parking maximums as a level district goal within the city relying upon the assessed/projected needs of the neighborhood to further propagate their vision.

The City has shown the ability and desire to implement smart growth enabling transportation policies and will likely continue to do so into the future. However, it is important that the community including UCSF, other large employers and existing and new residents be engaged in the planning process as their community grows in concert with the development.

As such, there are a number of implementable strategies that merit investigation for the area based on the potential for the area and innovative smart growth programs and policies executed in communities throughout the Bay Area and North America.

Smart Growth Parking Strategies

The following policies and programs are suggested for more discussion.

Non-motorized connectivity:

Mission Bay is in close proximity to the future 3rd Street Light Rail and Caltrain Depot. The City should support their existing policies and programs to enhance non-motorized connectivity between Mission Bay and these transit centers. Federal funding for these enhancements through MTC's Transportation for Livable Communities (TLC) grant program is one example of many of the funding sources available for these types of programs. Enhancements include but are not limited to:

- Bike lanes and bicycle parking amenities.
- Pedestrian amenities such as: wider sidewalks, pedestrian scaled lighting, seating, street trees, enhanced crosswalks
- Connections to local and regional bike paths/trails

TDM Programs and Policies:

The Mission Bay Plan, adjusted for life sciences/biotechnology uses calls for 20,426 supply of parking spaces including on and off-street supply, and a total peak parking demand of 24,733 spaces producing a shortfall of 4,307 spaces. With the planned growth of the Life Sciences/Biotechnology industry in the Mission Bay study area in addition to planned future growth of office space, retail and light industrial development, there is an opportunity for the City of San Francisco to more strongly implement the travel demand management policy requiring new developments of a certain size to provide TDM supportive infrastructure and employers of a certain size to establish TDM programs (as outlined in the SEIR) to encourage and support alternative transportation modes for their employees and reduce the demand for single occupancy vehicle travel. At this time a TSM has been established but to date few of the suggested policies have been implemented.

Pricing (on-street)

At this time available on-street parking in Mission Bay South is free as the area is mostly undeveloped. Current UCSF off-street parking facilities are available to the public for a fee and additional off-street parking is planned to be provided for by employers in planned developments. A small portion of the planned parking for the Mission Bay development is designated on-street and should be priced for short term occupancy of one hour or less to encourage the use of the abundant off-street parking.

Rent Rebates:

Rent rebates should be explored for both affordable and market rate housing in North Mission Bay where developers are bound by regulatory barriers that require providing more parking than is demanded by residents or parking has already been provided. Households who do not require a parking space should be provided with a reduction/rebate in rent to reflect the real costs associated in providing parking. If residents are not forced to pay the costs associated with parking spaces, the use of single vehicle occupancy vehicles are being incentivized over alternative modes of transit. A city agency such as the DPT may administer this program, where rebates can be provided to the property owner for the number of parking spaces not used by residents in return for a rent reduction to the tenants.

Unbundling Parking:

A policy for unbundling parking from residential developments should be explored in the undeveloped areas of South Mission Bay particularly in developments within walking distance from a transit hub or significant transit service¹⁰ (i.e. Caltrain station, 3rd Street light rail). MTC 2000 BATS data indicate a high rates transit, walking and bike trips¹¹, coupled with lower average auto ownership, vehicle trips and VMT for residents living within a half-mile of a transit station or ferry terminal.

¹⁰ "Households within ½-mile of a station produce between 47% and 60% fewer vehicle miles than their suburban and rural counterparts, which means that emissions per capita is much lower for the ½-mile group." MTC Sept, 2006. pp43.

¹¹ "When broken down by mode, per capita transit trip rates for ½-mile residents are between two and a half and eleven times higher than other residents. Bicycle trip rates for ½-mile residents are almost twice the regional average and are between two and five times higher than residents living more than 1 mile from a rail or ferry stop. The same trend holds for walk trip rates." *Characteristics of Rail and Ferry Station Area Residents in the San Francisco Bay Area: Evidence from the 2000 Bay Area Travel Survey* *Characteristics of Rail and Ferry Station Area Residents in the San Francisco Bay Area: Evidence from the 2000 Bay Area Travel Survey*. Volume I. MTC Sept 2006. pp 42.

Improved Technology and Convenience (South)

Pay and Display Demonstration Project:

Pay and display metering technology helps to institute flexibility in on street parking pricing and provide convenience to users. Due to its early stage of development the Mission Bay South area would be a good candidate for demonstration project of pay and display meters with graduated parking fees which discourage long term on-street parking. This demonstration can set up for on street parking on 16th and 4th Streets south of UCSF and west of 3rd Street and can be triggered by a set level of development.

Parking Management Plan

Mission Bay South

The UCSF currently has a parking management plan which prioritizes user groups and utilizes a shuttle service to maximize the use of satellite parking and local transit connectivity. The remainder of the Mission Bay South development area should be required to coordinate with UCSF and create a comprehensive parking management plan for the district. A comprehensive parking management plan should be considered which:

- allocates appropriate amounts of parking to different users (e.g. residents, visitors, employees)
 - on-street residential permitted parking
 - off-street employee parking, satellite parking and shuttle
- manages demand, availability
 - prices parking according to peak time and location

Mission Bay North and South Beach

On street parking regulations need re-evaluation around Mission Bay North and AT&T Park (San Francisco Giants Baseball Park). Due to significant development pressure in the north and surrounding South Beach neighborhood, there has been a rapid increase in parking demand and traffic congestion. There appears to be very little on- or off-street supply even during non-game days. Due to their proximity and symbiotic relationship, a parking management plan that considers the unique needs and demands of both neighborhoods should be established.

Parking Supply Flexibility

The majority of parking policy for the study area has been established by the Mission Bay SEIR which has set a maximum parking requirement or parking cap for the area. This has resulted in the need for a review of every development project with in the area that affects parking. What should be considered is a Portland style approach¹² that provides flexibility within the parking cap, such as parking bank where spaces can be traded between neighboring parcels and developments without need for an extensive parking study.

¹² In 1975 the City of Portland, Oregon instituted a strict parking cap, providing for only 40,000 parking spaces in a 300-block area within the downtown area.

Next Steps

1. Stakeholder Interviews: Stakeholders will be interviewed to understand their perspectives on SFCTA's potential parking policies/programs including a centralized/shared use parking structure
2. Mission Bay North Resident Surveys
3. Development of a Parking Profile